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NSW GOVERNMENT | Planning & Infrastructure

Memorandum

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Subject: Super Retail Group Distribution Centre, Lenore Drive, Erskine Park: Hazards and Risks

Background

The site was originally approved as printing, warehouse and distribution facility. The current modification seeks to change the use of the site to warehouse and distribution facility. Packing activities will be undertaken as part of the operations.

A number on dangerous goods materials is proposed to be stored in a dedicated Dangerous Goods (DG) store, located at the north-eastern part of the site.

Review

The quantities of DG materials proposed to be stored trigger SEPP 33 and the proposal falls under the definition of "potentially hazardous storage establishment". In compliance with SEPP 33, a Preliminary Hazard Analysis is enclosed to the application for a modification.

A multi-level risk assessment (MLRA) is carried out to establish that Level 2 (partial quantification) hazard analysis should be undertaken. The MLRA is also used to determine the events which may have off-site consequences and are taken for further analysis. The storage of 180 000 l of Class 2.1 flammable gases in aerosol cans is identified as one of the major risk contributors.

The identified potential hazardous events, their consequences and the proposed prevention and protection measures are listed in Table 4-8 of the PHA. In accordance with Level 2 analysis, the most significant events with potential for off-sire impacts are taken for further analysis.

It is noted that a release of Class 2.1 materials is modelled as pool fire, although a release of pressurised flammable gas is more likely to result in a flash fire. Even though the hazard identification identifies "Fireball radiation in Class 2.1 storage area" this event is disregarded from further analysis due to proposed control and prevention measures.

- It should be noted that flash fire accidents have occurred in the past in warehouses storing aerosols (http://www.thenorthernecho.co.uk/news/8621887.Crews_tackled_200ft_flames/). The Department considers that the consequences of a flash fire should be estimated and if found to have off-site effect, should be taken to the next level of analysis. The issue of escalation of the event within the aerosol area caused by multiple cans being involved in a fire (for example due to radiant heat from a fire in the flammable liquids area) should be also addressed.

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